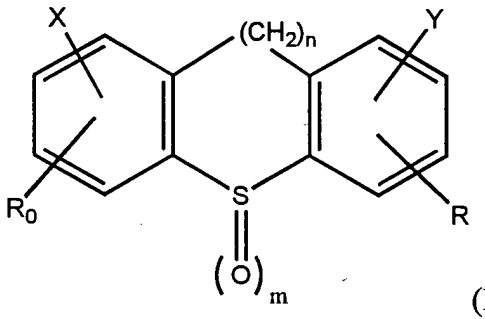
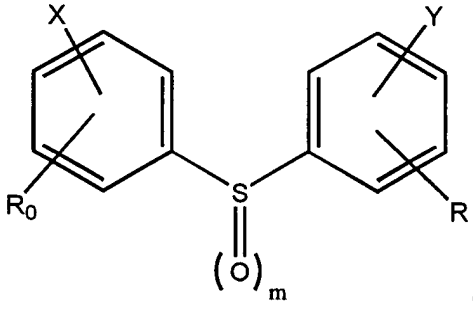
What is claimed:

1. A method for promoting tissue regeneration or expression comprising administering to a mammal a tissue regeneration promoting effective amount or a tissue expression promoting effective amount of a composition containing a compound having one of the following structural formulas:

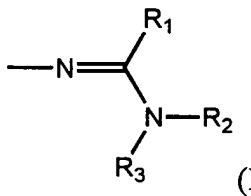


(I) or

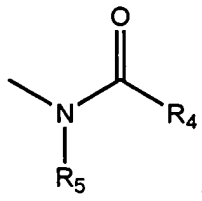


(II)

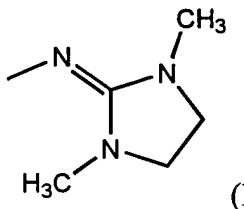
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or -$NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



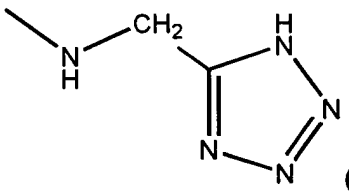
(Ia), or



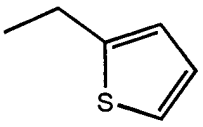
(Ib), or



(Ic),

or  (Id), or -N=CHOC$_2$H$_5$ or -(CH$_2$)$_q$CN where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:

 (Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be -(CH$_2$)$_p$- where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; -(CH$_2$)$_q$CN where q is an integer from 1 to 5, -CH$_2$COR$_6$ or -CH$_2$-NR$_7$R$_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

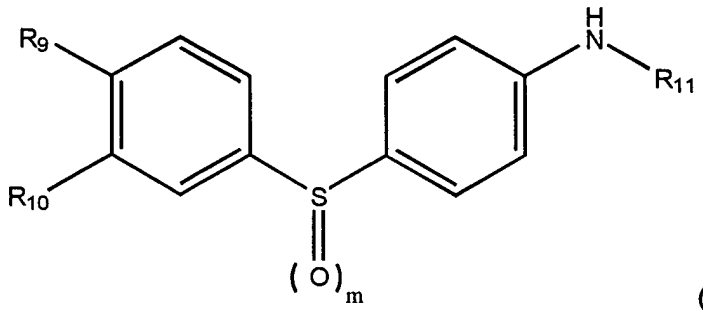
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

2. The method of claim 1, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

3. The method of claim 2, wherein the administration is intralesional.

4. The method of claim 1, wherein the composition comprises a compound of the following formula:



(III)

wherein m is 0, 1 or 2; R_9 is hydrogen, fluoro, chloro, bromo, nitro, alkoxy having up to 3 carbon atoms or $-NHCOCH_2NHCH_3$; R_{10} is hydrogen or chloro; and R_{11} is $-(CH_2)_qCN$ wherein q is an integer from 1 to 5, $-COCH_2NH_2$, $-COCH_2NHCH_3$, $-COCH_2Cl$, $-COCH_2CH_2Cl$ or $-C(O)R_{12}$ wherein R_{12} is an alkyl group having up to 4 carbon atoms; and pharmacologically acceptable salts thereof. .

5. The method of claim 4, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

6. The method of claim 4, wherein R_9 is fluoro, m is 2, and R_{11} is $-C(O)R_{12}$ and R_{10} is hydrogen.

7. The method of claim 6 wherein the compound is N-[4-[(4-fluorophenyl)sulfonyl]phenyl]acetamide.

8. The method of claim 1 wherein the method is for promoting neural regeneration.

9. The method of claim 8, wherein the mammal is human.

10. The method of claim 1, wherein the tissue is of neuronal origin and the method is for promoting neural expression.

11. The method of claim 10, wherein the mammal is human.

12. The method of claim 11 wherein the administration is effective to promote the neural expression of one or more proteins selected from the group consisting of: eNCAM, MAP II, β-tubulin, nestin, NF and NF-PO_4; said increase occurring in the bone marrow or neural tissue of the mammal.

13. The method of claim 1, wherein the tissue is a liver cell and the method is for promoting liver cell regeneration..

14. The method of claim 13, wherein the mammal is a human.

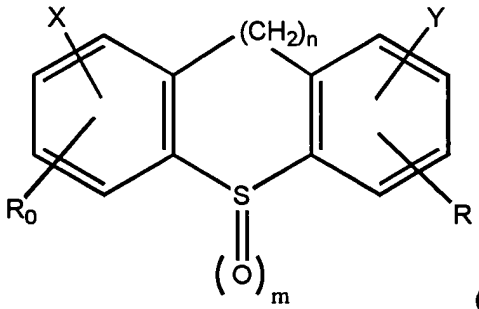
15. The method of claim 1, wherein the tissue is a pancreatic cell and the method is for promoting pancreatic cell regeneration.

16. The method of claim 15, therein the mammal is a human.

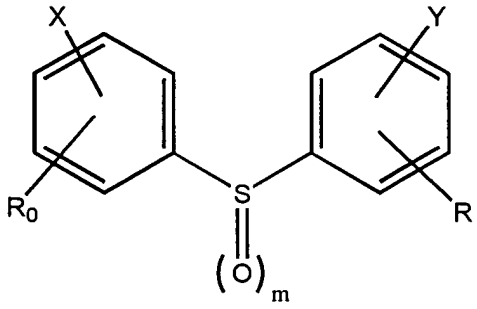
17. The method of claim 1, wherein the tissue is muscle cell and the method is for promoting muscle cell regeneration.

18. The method of claim 1, wherein the mammal is a human.

19. A method for promoting increased neuronal function after a decrease in neuronal function due to a trauma, an injury or a neurodegenerative disease or condition; the method comprising administering to a mammal an increased neural function promoting effective amount of a composition containing a compound having one of the following structural formulas:

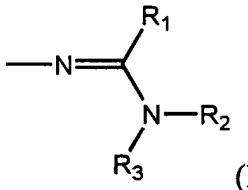


(I) or

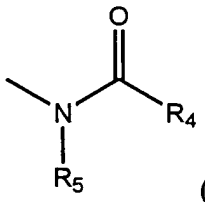


(II)

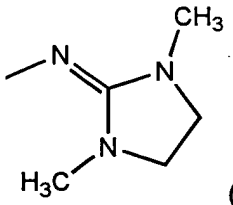
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or -$NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



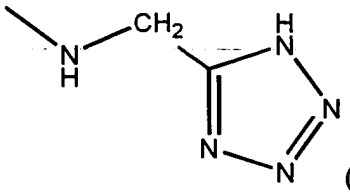
(Ia), or



(Ib), or

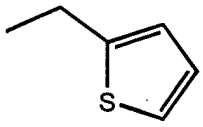


(Ic),



or (Id), or -$N=CHOC_2H_5$ or -$(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

20. The method of claim 19, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

21. The method of claim 19, wherein the decrease in neural function is due to injury to neural tissue as a result of acute or chronic spinal cord injury, radiation or chemical injury.

22. The method of claim 21, wherein the injury is caused by chemotherapy or radiation therapy.

23. The method of claim 21, wherein said chemical injury is caused by an excitotoxic agent.

24. The method of claim 23, wherein the excitotoxic agent is glutamate.

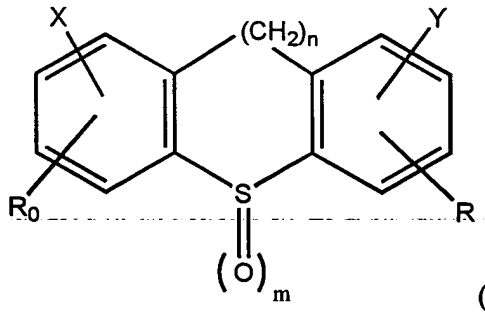
25. The method of claim 19, wherein the decrease in neural function is due to a neurodegenerative condition or disease.

26. The method of claim 25 wherein the neurodegenerative condition or disease is selected from the group consisting of multiple sclerosis, Alzheimer's Disease, Parkinson's Disease, amyotrophic lateral sclerosis, Huntington chorea, spinal cerebellar degeneration, diabetes mellitus, senile dementia and dysplasia.

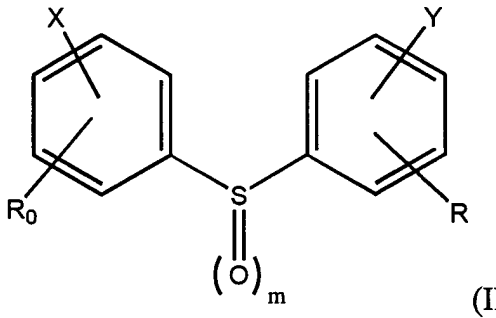
27. The method of claim 19 wherein the decrease in neural function is due to injury to neurons resulting from surgery.

28. The method of claim 19, wherein the mammal is a human.

29. A method for improving learning or memory function in a mammal comprising administering to a mammal a learning improving effective amount or a memory function improving effective amount of a composition containing a compound having one of the following structural formulas:

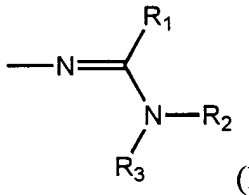


(I) or

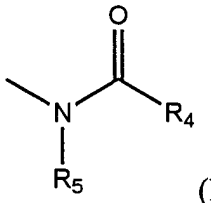


(II)

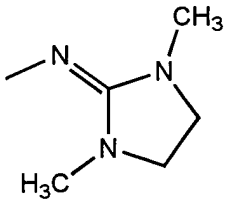
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



(Ia), or

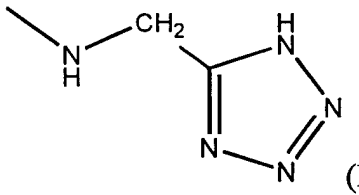


(Ib), or



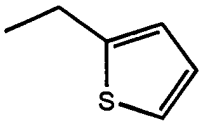
(Ic),

or



(Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

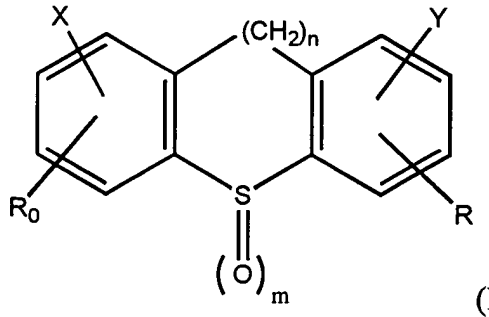
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

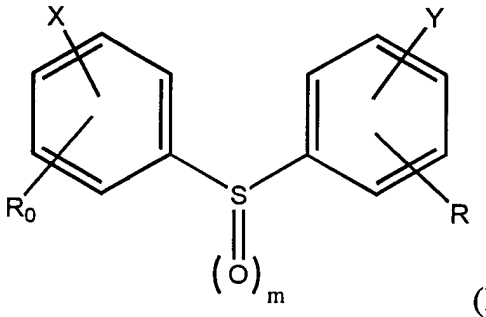
30. The method of claim 29, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

31. The method of claim 30, wherein the mammal is a human.

32. A method for promoting neural regeneration or neural expression comprising administering to a first mammal a neural regeneration promoting effective amount or a neural expression promoting effective amount of a composition, collecting cells from the first mammal and delivering them to a site of injury in the first mammal or in a second mammal; wherein the composition comprises a compound having the formula:

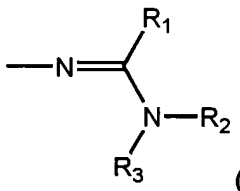


(I) or

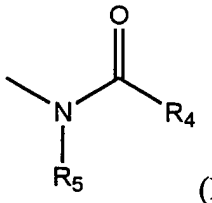


(II)

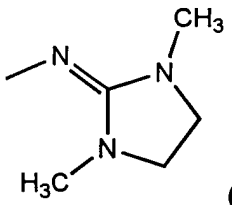
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



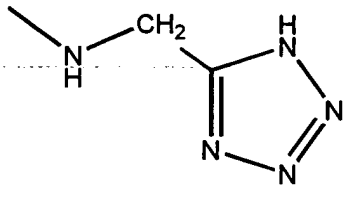
(Ia), or



(Ib), or

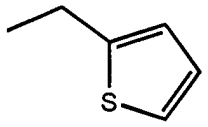


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

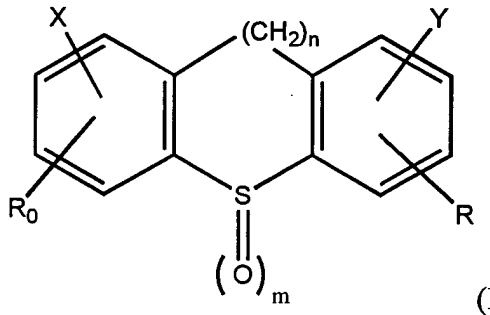
33. The method of claim 32, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

34. The method of claim 32, wherein the cells are bone marrow cells.

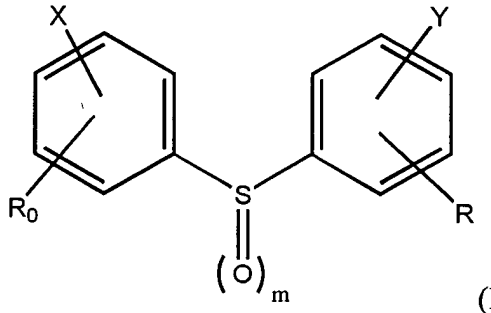
35. The method of claim 34, wherein the cells are delivered to the site of injury in the first mammal.

36. The method of claim 35, wherein the first mammal is human.

37. A composition adapted for parenteral administration comprising a compound having the formula:

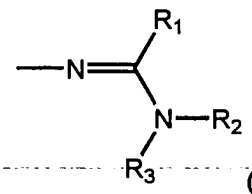


(I) or

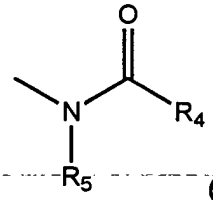


(II)

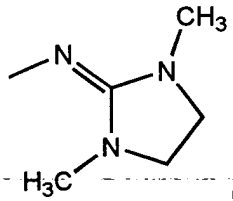
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



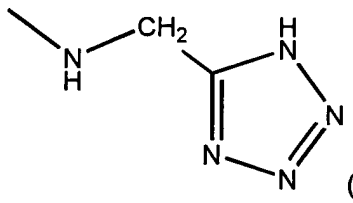
(Ia), or



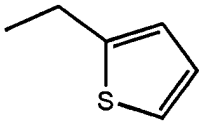
(Ib), or



(Ic),

or  (Id), or -N=CHOC$_2$H$_5$ or -(CH$_2$)$_q$CN where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:

 (Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be -(CH$_2$)$_p$- where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties;

-(CH$_2$)$_q$CN where q is an integer from 1 to 5, -CH$_2$COR$_6$ or -CH$_2$-NR$_7$R$_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

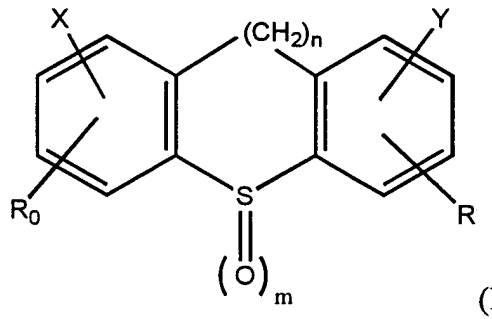
R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

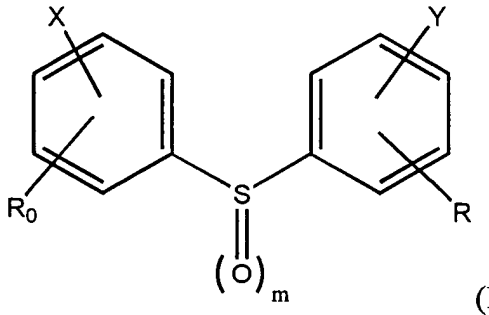
and pharmacologically acceptable salts thereof; and a parentally and pharmaceutically acceptable carrier.

38. The composition of claim 37, wherein the composition is adapted for intralesional or intrathecial administration.

39. A composition, optionally adapted for parenteral administration, comprising one or more cells obtained from a mammal subsequent to administration to the mammal of at least one compound of one of the following formulas:

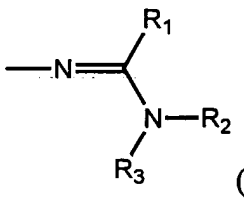


(I) or

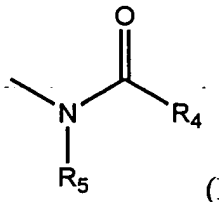


(II)

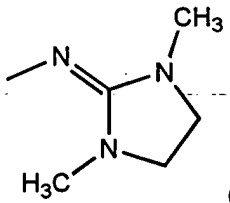
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or -$NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



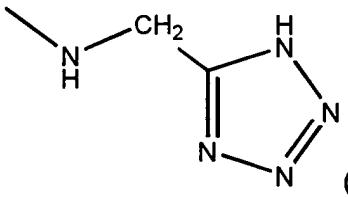
(Ia), or



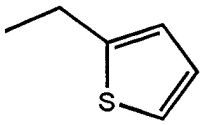
(Ib), or



(Ic),

or  (Id), or -N=CHOC$_2$H$_5$ or -(CH$_2$)$_q$CN where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:

 (Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be -(CH$_2$)$_p$- where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties;

-(CH$_2$)$_q$CN where q is an integer from 1 to 5, -CH$_2$COR$_6$ or -CH$_2$-NR$_7$R$_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

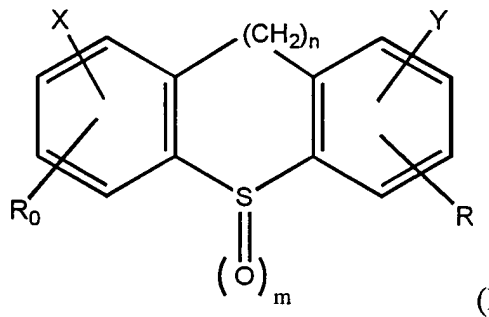
40. The method of claim 39, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

NO Antecedent basis

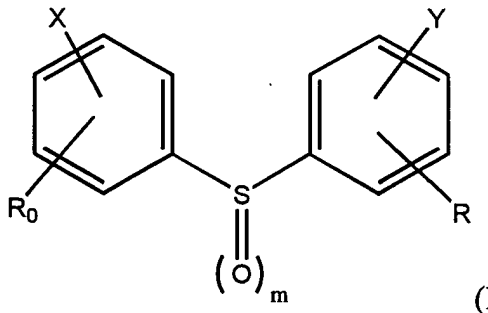
41. The composition of claim 40, wherein the composition is adapted for intralesional or intrathecial administration.

42. The composition of claim 40, wherein the composition additionally comprises a compound of formula (I) or (II).

43. A method for promoting the proliferation or differentiation of progenitor cells comprising contacting the progenitor cells with a proliferation effective or differentiation effective amount of a compound having one of the following structural formulas:

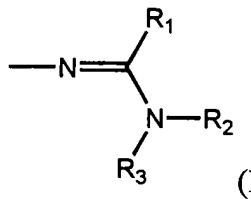
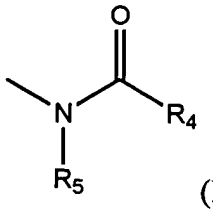
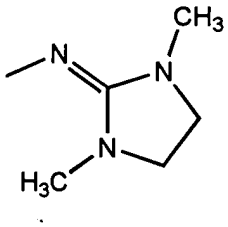


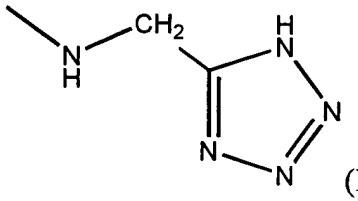
(I) or



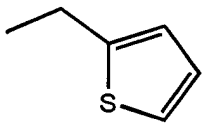
(II)

wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or -$NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:


(Ia), or 
(Ib), or 
(Ic),


or (Id), or -N=CHOC$_2$H$_5$ or -(CH$_2$)$_q$CN where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:


(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be -(CH$_2$)$_p$- where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; -(CH$_2$)$_q$CN where q is an integer from 1 to 5, -CH$_2$COR$_6$ or -CH$_2$-NR$_7$R$_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

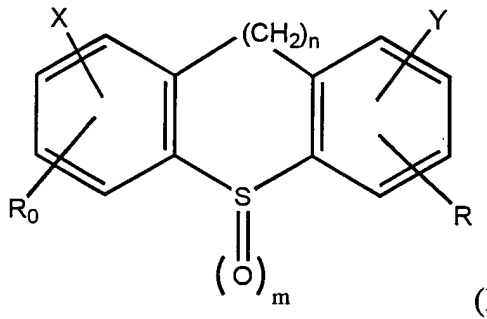
R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;
and pharmacologically acceptable salts thereof.

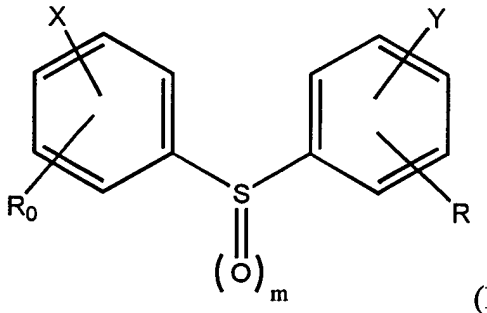
44. The method of claim 43, wherein the progenitor cells are neural progenitor cells.

45. The method of claim 43, wherein the progenitor cells are bone marrow cells.

46. A method for treating injury to neural tissue comprising administering to a mammal a neural injury treating effective amount of a composition containing a compound having one of the following structural formulas:

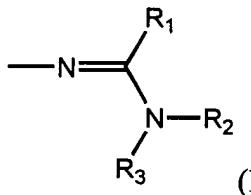
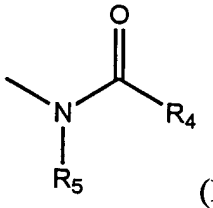
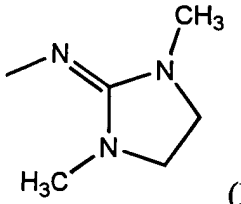


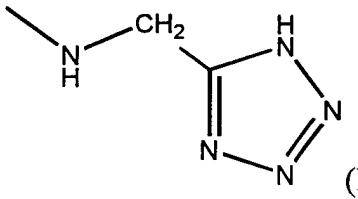
(I) or



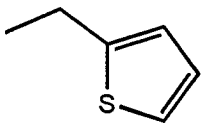
(II)

wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:


(Ia), or 
(Ib), or 
(Ic),


or (Id), or -N=CHOC$_2$H$_5$ or -(CH$_2$)$_q$CN where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:


(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be -(CH$_2$)$_p$- where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; -(CH$_2$)$_q$CN where q is an integer from 1 to 5, -CH$_2$COR$_6$ or -CH$_2$-NR$_7$R$_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;
and pharmacologically acceptable salts thereof.

47. The method of claim 46, wherein the injury is caused by acute or chronic spinal cord injury, radiation or chemical injury.

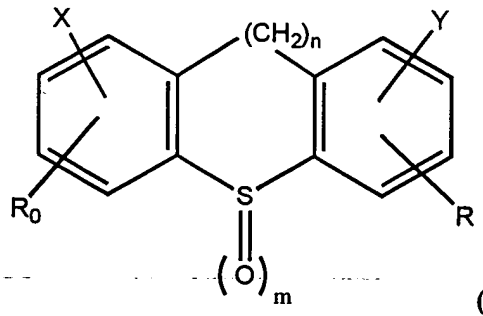
48. The method of claim 47, wherein the chemical injury is caused by an excitotoxic agent.

49. The method of claim 48, wherein the excitotoxic agent is glutamate.

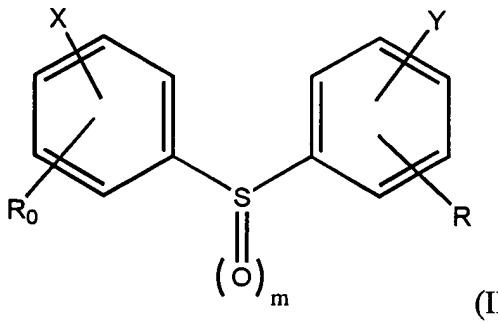
50. The method of claim 46, wherein the injury is caused by chemotherapy or radiation therapy.

51. The method of claim 46, wherein the mammal is a human.

52. A method of treating a neurodegenerative condition or disease comprising administering to a mammal a neurodegenerative condition treating effective amount, or a neurodegenerative disease treating effective amount, of a composition containing a compound having one of the following structural formulas:

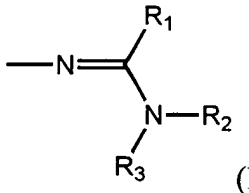


(I) or

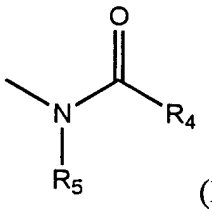


(II)

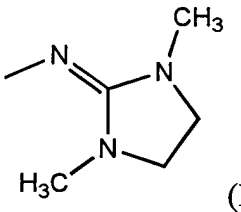
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



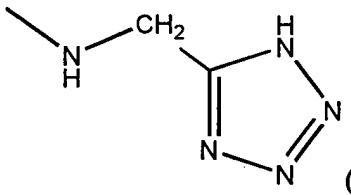
(Ia), or



(Ib), or

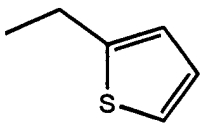


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

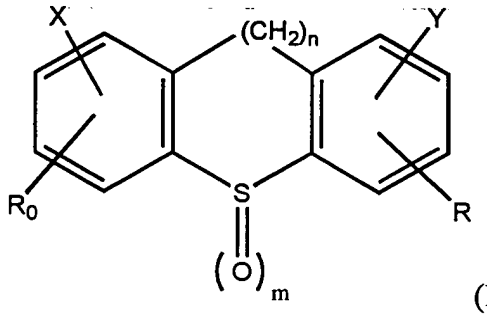
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

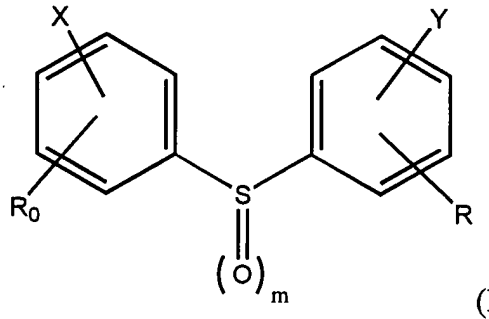
53. The method of claim 52, wherein the neurodegenerative condition or disease is selected from the group consisting of multiple sclerosis, Alzheimer's disease, Parkinson's disease, amytrophic lateral sclerosis, Huntington's chorea, spinal cerebellar degeneration, diabetes mellitus, senile dementia and dysplasia.

54. The method of claim 52, wherein the mammal is a human.

55. A method for treating injury to neurons resulting from surgery comprising administering to a mammal a neural injury treating effective amount of a composition containing a compound having one of the following structures:

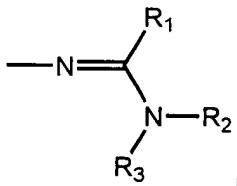


(I) or

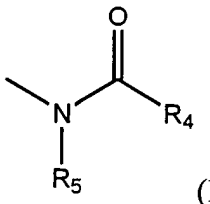


(II)

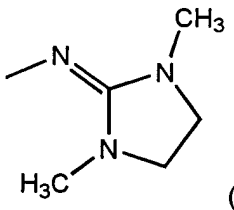
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



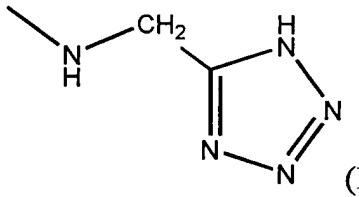
(Ia), or



(Ib), or

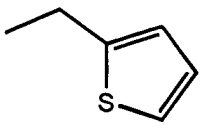


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

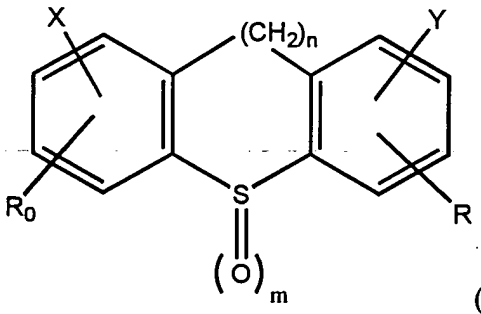
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

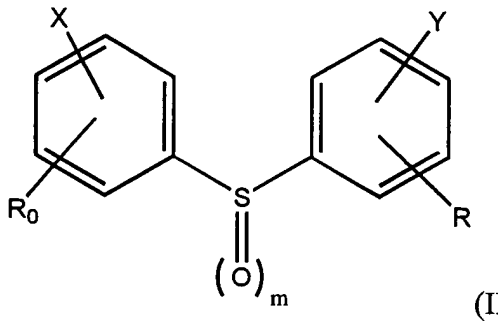
56. The method of claim 55, wherein the mammal is a human.

57. A method for promoting regeneration of cells comprising

(a) administering to a first mammal, so as to contact certain cells, a compound having one of the following structural formulas:

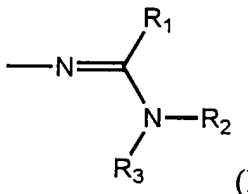


(I) or

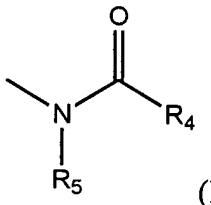


(II)

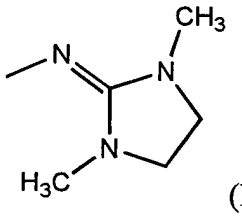
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or -$NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



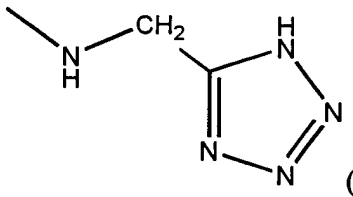
(Ia), or



(Ib), or

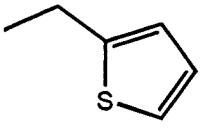


(Ic),



or (Id), or -$N=CHOC_2H_5$ or -$(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof;

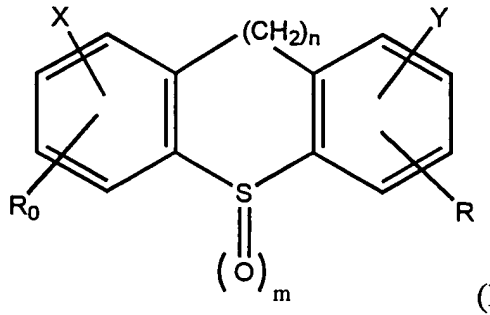
(b) harvesting the resulting contacted cells; and

(c) administering the harvested cells to a second mammal;

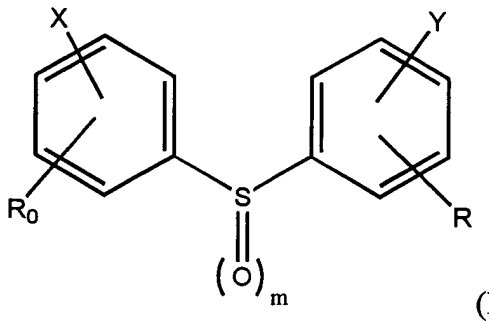
wherein the first mammal and the second mammal are the same or different.

58. The method of claim 57, wherein the second mammal is a human.

59. A method of treating a liver disease or condition associated with a decrease in liver function or cellular death or dysfunction comprising administering to a mammal a liver disease or condition treating effective amount of a composition containing a compound having one of the following structural formulas:

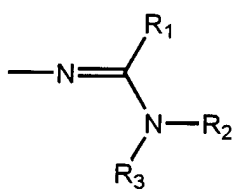


(I) or

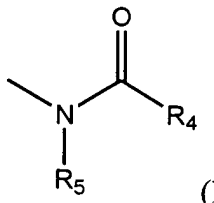


(II)

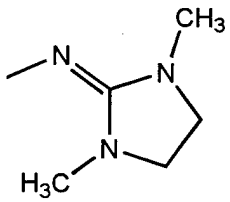
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



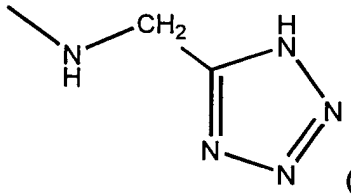
(Ia), or



(Ib), or

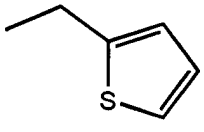


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

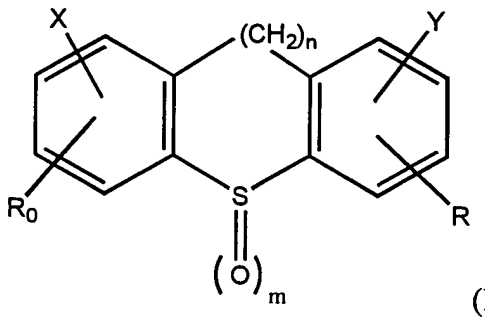
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

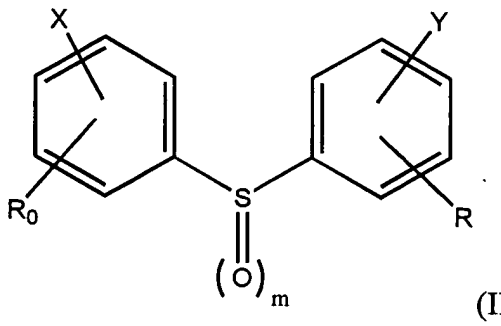
60. The method of claim 59, wherein the liver disease or condition is cirrhosis, non-cirrhotic fibrosis of the liver, hepatitis associated with toxin or drug exposure or hepatitis associated with an infectious microorganism.

61. The method of claim 59, wherein the mammal is a human.

62. A method for repairing damaged liver tissue comprising administering to a mammal a liver repairing effective amount of a composition containing a compound having one of the following structural formulas:

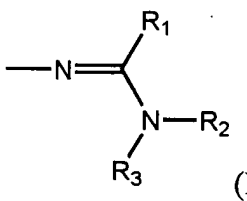


(I) or

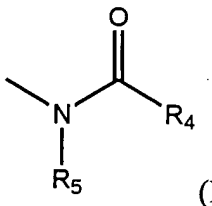


(II)

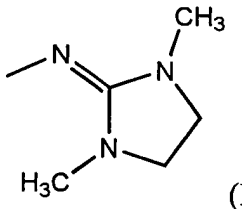
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



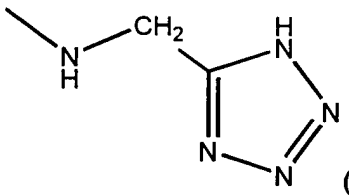
(Ia), or



(Ib), or

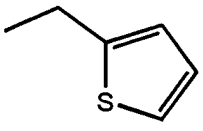


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

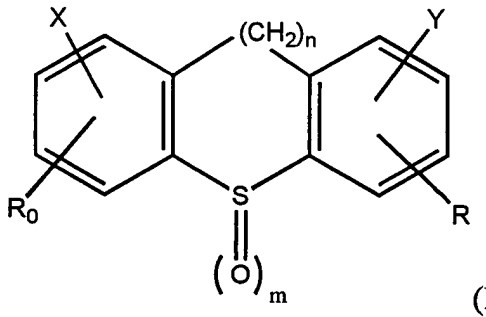
R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

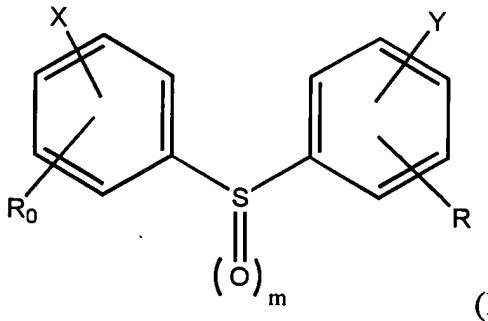
and pharmacologically acceptable salts thereof.

63. The method of claim 62, wherein the mammal is a human.

64. A method for growing cells in vitro or in vivo comprising contacting the cells with a compound having one of the following structural formulas:

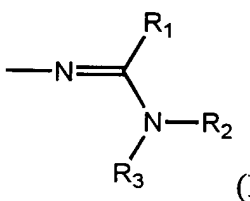


(I) or

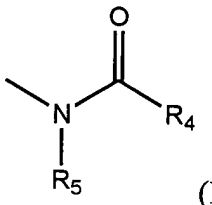


(II)

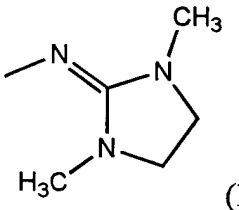
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or -$NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



(Ia), or

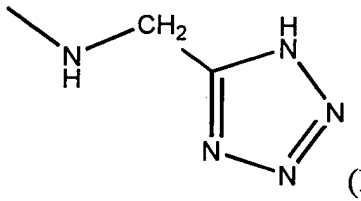


(Ib), or



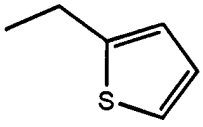
(Ic),

or



(Id), or -$N=CHOC_2H_5$ or -$(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

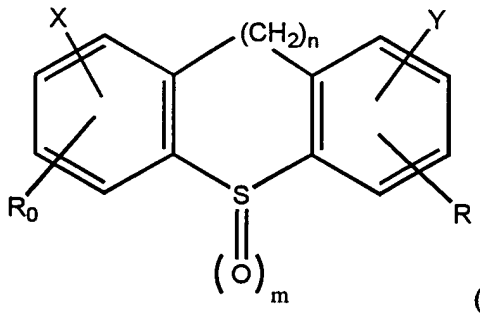
and pharmacologically acceptable salts thereof.

65. The method of claim 64, wherein the cells are liver cells.

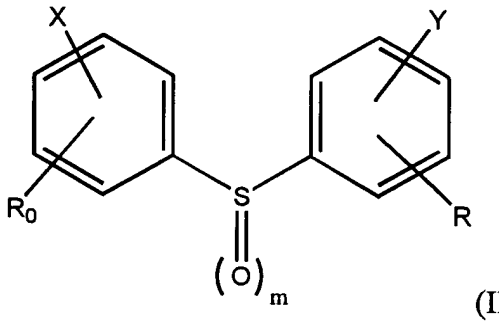
66. A method for growth of liver cells in culture for use in transplants comprising:

(a) removing living liver cells from a first patient;

(b) placing the liver tissue in a medium supplemented with a compound having one of the following structural formulas:

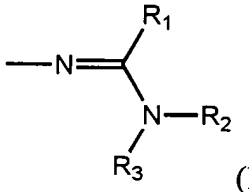


(I) or

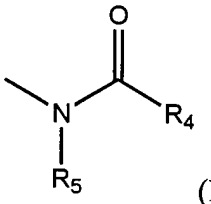


(II)

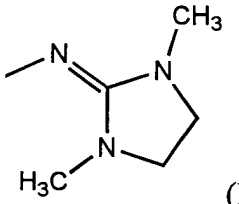
wherein n is 0 or 1; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_o are independently H, halogen or a moiety of one of the following formulas:



(Ia), or



(Ib), or

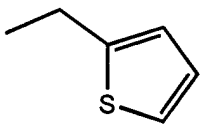


(Ic),

or

(Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_qCN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspiro[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

(c) incubating the cells to allow expansion of the cells; and

(d) transferring the cells back to a second patient;

Wherein the first patient and the second patient can be the same or different.